

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

Applicant(s):	Daniel Iancu <i>et al.</i>	Conf. No.:	9548
Serial No.:	10/615,902	Art Unit:	2611
Filed:	July 10, 2003	Examiner:	MALEK, Leila
For:	<b>MULTIPLE COMMUNICATION PROTOCOLS WITH COMMON SAMPLING RATE</b>		

**AMENDMENT**

Mail Stop Amendments  
U.S. Patent and Trademark Office  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

In response to the Patent Office action dated June 27, 2006, Applicants have amended the claims as shown on the attached Claims Summary.

Claims 1, 7 and 10 have been objected to for informalities. With respect to Claim 1, the acronyms A/D converter and D/A converter are well-known acronyms for analog to digital and digital to analog. They are commonly used throughout the industry and are recognized by one of ordinary skill in the art. A typical example is shown in the cited Siegel et al. publication 2004/0198381 in paragraph 34. The main reference to Culpepper et al. also uses the acronyms for D/A and to A/D converters in the area noted by the Examiner at the bottom of Column 5 and top of Column 6.

With respect to Claim 7 and the different communication protocols, Applicants again assert that these are well-known acronyms. See again the Siegel et al. publication at paragraph 4 that has GPS, and paragraph 30 uses GSM. Also submitted herewith is the FCC publication 01-192 Sixth Report released July 17, 2001. Footnote 32 on page 7 shows that the acronyms WCDMA, GSM and GPRS are well-known acronyms. According to U.S. Patent 7,034,769 to Surducan et al., Column 2, beginning on line 45 use of the acronyms WLAN, GPS and Blue Tooth. Column 1, second paragraph defines WLAN as “wireless local area network.”

Thus, these acronyms are well-known to one of ordinary skill in the art. As discussed in the MPEP 70303D paragraph 7.3401 and the Examiners note 2, "If the scope of the claimed subject matter can be determined by one of ordinary skill in the art, rejection using this form paragraph would not be appropriate." Applicants request recession of the objection. Thus the claims are considered to meet the statutory requirement.

With respect to Claim 10, the parameter  $n$  has been defined.

Claim 10 was not rejected and indicated as directed to allowable subject matter. Claims 1 and 9 have been incorporated into Claim 10. Thus, Claim 10 is considered allowable.

Claims 1 through 9 have been rejected under 35 U.S.C. 103 as being unpatentable over Applicants' admitted prior art in view of Culpepper et al. by itself or in combination with Siegel et al., Saxon et al., and/or Kokkosoulis et al. These rejections are respectfully traversed.

Claim 1 is directed to a radio having a first channel for receiving signals at a first carrier frequency; a second channel for receiving and transmitting signals at a second carrier frequency; and a multiplexer connected to the first and second channels. An A/D converter and a D/A converter connect the channels through the multiplexer to a digital signal processor. An oscillator is connected to and provides a common sampling rate to the A/D and D/A converters. The digital signal processor controls the multiplexer and modifies the received and transmitted digital signals to accommodate for the different carrier frequencies using the common sampling rate.

The Culpepper et al. patent is a beacon signal receiving system. As indicated in the Abstract, it is "[A] method and apparatus for locating and tracking a portable transmitter...." Thus its channels are directed to receiving signals at a common carrier frequency. The use of a doppler antenna array 28 including three antennas 20a, 20b and 20c have very specific positions such that the system 27 can provide the direction signal 26a. The Examiner is correct that because each channel is of a common carrier frequency, the sampling rate of the A/D and D/A converters are the same. They are just out of sequence because of the unique phase relationship of the antennas of the array which receive the common carrier channel.

Thus Culpepper et al. only teaches the receipt of a common carrier channel on three different antennas from the common array and the processing in a phase relationship to produce information including direction resulting from the antenna array. It does not teach using a common sampling rate from two channels having different carrier frequencies. Thus, it would not be obvious to one of ordinary skill in the art to modify Applicants' Figure 1

admitted prior art, wherein different carrier frequencies were used, to incorporate the teaching of handling a common carrier frequency from a doppler array of antennas using a single sampling rate.

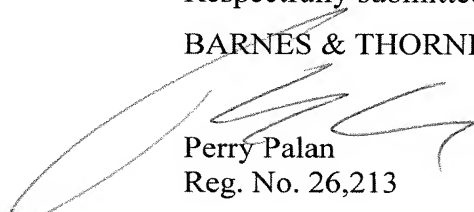
As indicated in the Office action on page 5, Siegel et al. is “in the same field of endeavor, discloses a method/apparatus for locating a transmission signal from a radio transmission emitter device, such as a cell phone,...” Again, this is a teaching with respect to a single carrier frequency and does not correct further deficiency of Culpepper.

The prior art of record does not by itself or in combination teach the specific combination of Claim 1. It also does not show the additional limitations of the dependent claims. Thus Claim 1 and its dependent claims are considered allowable. Passage to this case to issue is respectfully solicited.

It is respectfully requested that, if necessary to effect a timely response, this paper be considered as a Petition for an Extension of Time sufficient to effect a timely response and shortages in other fees be charged, or any overpayment in fees be credited, to the Barnes & Thornburg LLP, Deposit Account No. 02-1010 (29803/40763).

Respectfully submitted,

BARNES & THORNBURG LLP



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